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ABSTRACT

The School Planning, Evaluation, and Communication System (SPECS) is an overall design for districtwide program assessment and development. It is both a way of interrelating planning and evaluation of individual programs and a way of comparing the outcomes of all district programs with the district's community-defined educational goals. Component Five, the final SPECS component, is the needs assessment or policy-making subsystem of SPECS. This implementation booklet describes the rationale for the component and discusses the assessment of the achievement of the district's community-defined goals. It describes in detail how a school district's board of education might go about identifying the most critical discrepancies between program outcomes and community expectations and the ways in which such discrepancies might be solved. The booklet discusses the method one school district used to answer its own needs, including the formation of a task force and the task force's summary of district programs and identification of the gaps and matches between the reported program outcomes and goals as defined by professionals and the community. As an example of Component Five activities, the mathematics portion of these activities at one elementary school is included. (Author/JM)

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SPECS 5

Component Five:

Assessing Achievement of the District's Broad Goals

Barbara Cole

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TO THE EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC) AND USERS OF THE ERIC SYSTEM."

EA 011 379

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Preface

SPECS is a comprehensive set of procedures and materials designed to facilitate program planning and evaluation in schools. Initial development of the system began in 1969 when it was implemented on a pilot basis in South Lane School District, Cottage Grove, Oregon. After the materials were revised during 1974 and 1975, the system was then tested in a number of school districts throughout the United States.

To help personnel in a district learn more about SPECS, plan for its implementation, and begin to make any or all of its five components operational, several kinds of materials have been developed. They include an illustrated monograph entitled **SPECS: What It Is and What It Does**, a series of implementation booklets relevant to each component of the system, and a set of operational forms for documenting program plans and results.

The implementation booklet for Component Five — the needs assessment or policy-making subsystem of SPECS — describes the rationale for the component and discusses the challenge of assessing the achievement of the district's community-defined goals. It describes in detail, how a school district's board of education might go about identifying the most critical discrepancies between program outcomes and community expectations and ways in which such discrepancies might be resolved. It is important to keep in mind that this does not represent the only approach to identifying, assessing, and resolving the issues related to achieving district goals. Rather it is the method which one district found valuable in answering its own particular needs.

Although emphasis here is given to assessment of program planning and evaluation in school districts, it is feasible that other educational organizations such as community colleges and private schools could use a similar process in assessing the needs and achievement of organizational goals.

Throughout the years that SPECS has been pilot and field tested a number of people have contributed to the Component Five activity described within the following pages. Particularly valuable have been the contributions of Ray Hanson, SPECS Coordinator in the South Lane School District, Cottage Grove, Oregon; and Jack M. Nagle, Harold E. Walker, and Lloyd DuVall of the SPECS Development Team. Also many teachers, administrators, and school board members within the South Lane School District contributed their thinking. Stephanie Henderson, also of the SPECS Development Team deserves tremendous recognition for editing the copy and credit is given to Mary Ann Cheshire for providing excellent production assistance. However, this work would not have been possible without the assistance of the Office of Education and more recently, the National Institute of Education, who have lent their support for the development and field-testing of SPECS.

Furthermore, a special thanks is given to Terry Eidell, one of the original conceptualizers of SPECS. Although Eidell officially departed from the program in mid-1973, he has continued to be supportive and helpful. His constructive criticisms of this manual have been particularly valuable.

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Pearl Kim
Age 7
Crayon

1. Introduction

Five Components

SPECS consists of five components of activitiy. As Figure 1 indicates, the first three components constitute its operating subsystem and are primarily the responsibility of a school district's professional staff of teachers and administrators. Together, these three components encourage systematic program planning and evaluation and the production of explicitly documented information about the "what is" state of a district's "operating programs" — what they are, how they are interrelated, their plans and their results. Component Four, the monitoring subsystem of SPECS, solicits views from representatives of the district's community on the "what is preferred" state of district programs. And Component Five, the policy-making subsystem of SPECS encourages the district's board of education to use this documented information about "what is" and "what is preferred" as a basis for identifying and resolving the district's most critical needs. The overall systems design of SPECS interrelates the different prerogatives of a district's professional staff, lay citizens, and school board members.

For example, although program planning and evaluation by the district's teachers and administrators, and broad goal definition by representatives of its larger community are separate and distinct activities, there is no prescribed order in which they must occur, and neither has more intrinsic worth than the other.

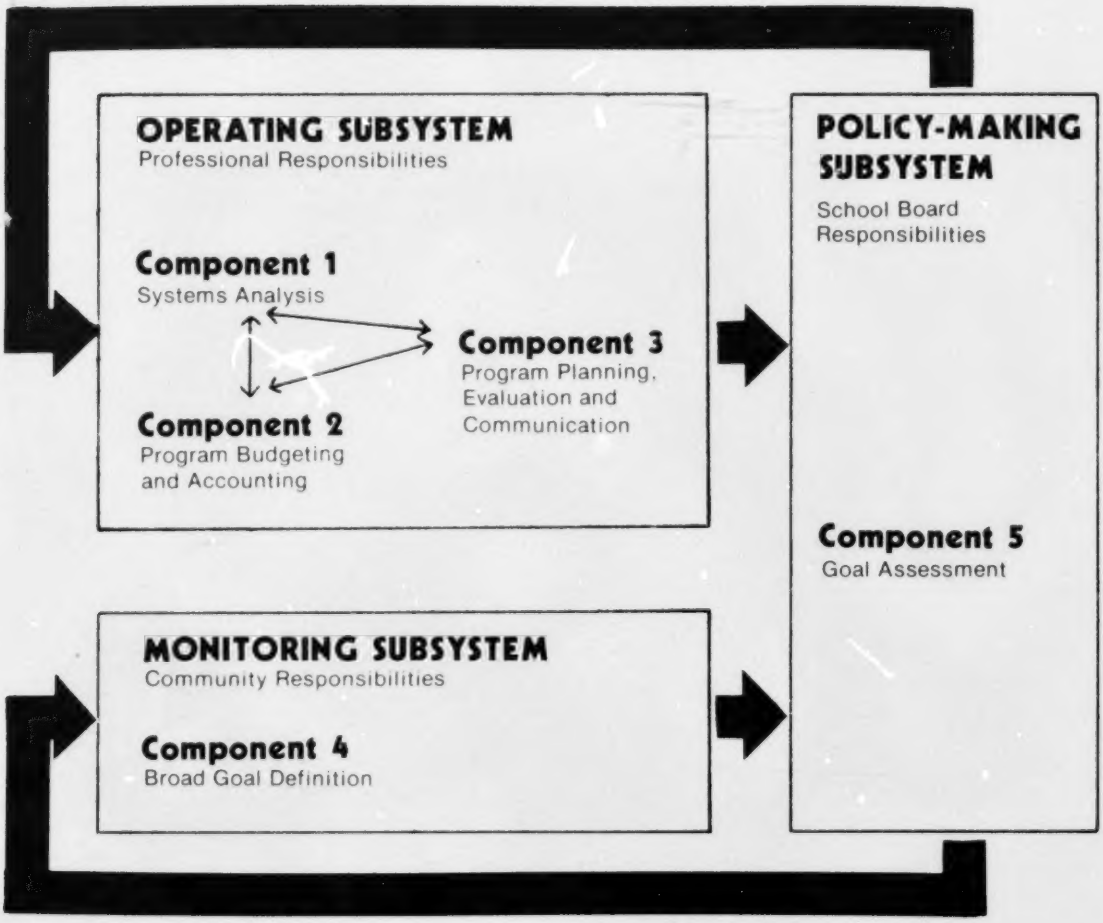


Figure 1: The SPECS Design

Objectives

Component Five is the culminating needs assessment component of SPECS, for it enables all who are involved in the district, including board members, professional staff, and citizens, to identify and deal with any gaps that may exist between the district's actual state as identified by SPECS Component Three activity and its preferred state as identified by SPECS Component Four activity.

That is, both sets of activities — program planning and evaluation and community-based goal definition — must occur before Component Five implementation can begin. Therefore, these two sets of information are essential for assessing district goals and identifying high priority needs.

When the summarized outcomes of district programs, including both objectives and actual results, are arrayed in Component Five against the district's community-defined educational goals, three objectives can be pursued:

1. To determine the degree to which the critical objectives identified within ongoing district programs are compatible;
2. To determine to what degree there is a logical match between the district's program objectives and its broadly defined community expectations;
3. To determine, where there is an identifiable match between program objectives and community expectations, if current performance levels on those objectives are satisfactory.

It is the responsibility of the district's board of education or its delegated committee not only to define the needs inherent in the objectives but also assign priorities to them and to make policy decisions for dealing with the most critical of those needs. By controlling district policies and resources, communicating new information to the community, and stimulating the development of new programs and modification of existing programs, board members can substantially influence either the future outcomes of district programs, the educational expectations of the district's citizenry, or both.

Assumptions

Underlying any theory, planning, or activity, is a set of basic assumptions from which the system must operate. Although these assumptions are sometimes explicit, more frequently they are implicit, and sometimes those most closely involved in the activity may be the least likely to be aware of them. In Component Five of SPECS, four very important assumptions are made:

1. Instructional programs have been defined in terms of an objective-based curriculum. In other words, Component Three of SPECS (or some other objective-based program) has been completed.
2. The district has established community-defined educational goals. (See SPECS Component Four Implementation Booklet.)
3. Both of the activities discussed in the first two assumptions have in fact been operationalized. Prior to any work in Component Five occurring, objectives must not only have been written, but they must have also been implemented and accurate records must have been kept. Therefore, in order to assure that accurate data are provided on which to base Component Five decisions, it is not only necessary that instructional programs be defined in terms of an objective-based curriculum, but it is also essential that the instructional processes and assessment procedures used, be closely related to these objectives.
4. The district has a purpose for identifying the district needs. Furthermore, the district will attempt to eliminate the gaps between the actual and preferred states which are made evident as a result of Component Five activity.

Kristin Colyer
Age 6
Watercolor

2. Implementation

Although Component Five of SPECS suggests as its major activities: 1) Summarizing the desired and actual outcomes of the district's instructional programs, and 2) Identifying matches and gaps between the desired and actual outcomes of the district's instructional programs and the structure of community-defined goals, several methods might be used to achieve these ends. The method which was used by a school in the Emerald District — Good Elementary School — has been presented here as an example of how one school was able to accomplish the task. While this method was found to be appropriate and valuable for this particular district's needs as it assessed its achievement of community-defined goals, no two districts or educational organizations will probably approach the task in exactly the same way.

On the following pages, information has been included from the Component Five activities of Good Elementary School's mathematics program (grades 1-6). Even though the information presented relates only to Good Elementary School, it provides an overview of how SPECS aided one school in gaining information about its program outcomes and comparing those outcomes with the expectations of the Emerald community.

In order to provide some idea of how this information was compiled in Good Elementary School and to provide a "roadmap" for finding one's way through these summaries, the following explanations/descriptions are offered:

The Task Force

The Superintendent of Emerald School District selected ten staff members from the four elementary schools, the junior high school, the senior high school and the district office to comprise the Component Five Task Force. Consideration was given in making these selections to the participants' experience in working with SPECS throughout the year and their interest in participating in this culminating activity.

Although the Task Force was involved in Component Five activity for all district programs, only their work in assessing the mathematics program at Good Elementary School will be considered here.

The Task

In Emerald District the ten Task Force members were given the responsibility of summarizing the outcomes of all district programs and identifying the gaps and matches between the community-defined goals and those professionally-defined objectives and reported program outcomes. Task Force members were not instructed, however, to draw additional conclusions about either the summary data or the matches. They were asked to leave this subsequent analysis of the data to building administrators, curriculum committees, and other personnel who were directly involved in each program.

Specifically the Task Force members were asked to participate in several activities which included:

1. Editing each performance objective to assure its clarity and manageability;
2. Clustering the course or grade level objectives to form mid-level program objectives;
3. Identifying goal statements from the district's community-defined goals which are relevant to each of the district's content areas;
4. Identifying matches and gaps between the community-defined goals and program outcomes at both the school and district levels.

Participation in the above activities meant rendering professional judgment which was necessarily affected by the particular opinions and experiences of each of the Task Force members. Therefore, to the extent possible, the Task Force member assigned to each particular task discussed his/her findings with at least one other Task Force member and attempted to reach agreement before drawing a final conclusion. Such a plan, however, in no way attempted to exclude others who might be interested in doing so, from looking at the data and arriving at the same or different conclusions.

Reporting Instructional Data

In June each of the eighteen regular teachers in Good Elementary School completed a SPECS **Instructional Program Summary Report** for the particular grade level of mathematics that s/he had been teaching during the school year. Each summary included four important elements:

1. The most critical terminal objectives of each year-long grade level program;
2. The related achievement indicators which defined those objectives in behavioral terms;
3. Statistical data regarding the performance of all students in each class on particular achievement indicators; and
4. A brief statement prepared by teachers that described specific instructional processes that did or did not work particularly well.

(In Good School all teachers of the same grade level identified common general and performance objectives. This commonality of objectives made aggregating outcome data relatively simple; it is not mandatory, however, that all objectives at a particular grade level be common.)

The Component Five Report

Pages 11-13 present the critical objectives of the mathematics program at each grade level and the actual student outcomes on each of these objectives as stated in the SPECS **Instructional Program Summary Reports**. Included in the outcome data are the total number of students involved in each objective, the percentage of students who demonstrated achievement before or after instruction, and the percentage of students for whom outcome data were not obtained. These three pages present the actual and desired outcomes by grade level

of last year's mathematics program in Good Elementary School.

Page15 presents a summary of the actual instructional processes employed by teachers that seemed to work especially well in meeting the mathematics program's critical objectives.

Pages 11-15, therefore, present information about Good Elementary School's mathematics program. A number of questions can be raised with respect to the critical objectives and achievement indicators used for each grade level, the instructional processes that seem worthy of greater or less use, and the degree of articulation across the six grade levels. Here, for example, are a few of those questions:

On which grade-level objectives did a significantly large percentage of students demonstrate achievement before instruction?

On which grade-level objectives did a significantly large percentage of students demonstrate achievement after instruction?

Regardless of whether students achieved the objective before or after instruction, on which grade-level objectives did a significantly large percentage of students in Good School achieve? And on which objectives did a significantly large percentage of students not achieve?

Were there significant content gaps or redundancies in the objectives treated from grade to grade?

And were there some grade-level objectives that might have been better handled at some other grade level?

One other question remaining to be addressed, however, is: "How well was Good School's total mathematics program doing in terms of the district's community-defined, broad educational goals?" Two kinds of "match" can be looked at: that between program **objectives** and broad goals and that between student **performance** and broad goals. Both kinds of "match" are important in assessing Emerald's achievement of its broad educational goals.

While it would be possible to search for a "match" between each of the grade-level objectives in Good School's mathematics program and those particular broad goals that are relevant to mathematics, Task Force members chose rather to develop **inductively** from the grade-level objectives, a set of objectives for the total six-year mathematics program in Good School and then to search for a "match" between those curricular objectives and the district's broad goals.

Page 16 presents the product of this effort with regard to the mathematics program. Reading from left to right, Column A presents the hierarchy of goal statements in the district's community-defined structure of goal statements that are particularly relevant to mathematics. These are then logically matched in Column B to the four critical objectives in Column C that were induced from the grade-level objectives presented earlier on Pages 11-13 Column D of the chart indicates the particular grade-level objectives that were clustered to form each critical objective; note also that the data in Column D indicate the degree of coverage across grade levels of each critical objective, thereby stimulating some interesting questions with respect to the articulation and balance of objectives across the six grade levels.

Finally, Column D indicates the performance of students on each of the grade-level objectives comprising each of the four critical objectives in Good School's mathematics program.

Page 16 enables the Task Force to assess two things:

1. The degree to which Good School's mathematics program is at least trying to work toward relevant community-defined goals (the "match" between Columns A and C); and
2. The degree to which the programs are actually achieving those broad goals (Column A viewed in terms of the performance data presented in Column D).

In summary, Component Five activity results in one main product — a periodic report which identifies specific needs for greater harmony between the district's community-defined goals and its critical objectives and indicates the match between the two. In addition, it points out specific needs for increased performance levels within each program, including suggestions developed by the district's Component Five Task Force for dealing with the most critical of those needs.

A SUMMARY OF OUTCOMES IN THE MATHEMATICS PROGRAM IN GOOD ELEMENTARY SCHOOL

	(A) Critical Objectives "By the end of each grade or course in the Program, a student should be able to..."	Summary of Student Performance: Percentage of Students who worked on the objective						Number of students who did not work on this particular objective	Number of students involved in the total program
		and demonstrated achievement		but did not demonstrate achievement	and demonstrated				
		before instruction (AB)	after instruction (AA)	(NA)	considerable effort (CE)	some effort (SE)	little effort (LE)		
Grade 1	1. Recognize and write number and numerals from 0-100.	10	75	15	40	45	15	8	
	2. Recognize and indicate the relative value of numerals from 0-100.	5	70	25	20	60	20	10	
	3. Indicate the numerals 0-100 as tens and ones.	25	60	15	15	80	5	3	150
	4. Add and subtract number facts from 0-10.	0	85	15	30	60	10	3	
	5. Read and write the hours on a clock.	30	60	10	50	45	5	14	
Grade 2	1. Read number words from "eleven" to "one hundred."	15	70	15	15	75	20	12	
	2. Write numerals from 101-200.	25	60	15	55	20	25	9	
	3. Add number facts through 18.	10	70	20	25	60	15	6	
	4. Subtract number facts through 18.	5	65	30	45	25	30	16	160
	5. Write the value of a given set of coins to $1.00.	15	30	55	15	45	40	4	
	6. Add two-digit numbers using regrouping.	3	75	25	20	65	15	10	
	7. Subtract two-digit numbers using regrouping.	5	70	25	20	65	15	9	
	8. Tell time to 5-minute intervals.	20	40	40	30	60	10	2	
Grade 3	1. Read any numerals in the thousands.	10	65	25	15	65	20	7	
	2. Write any numerals in the thousands.	10	55	35	10	85	5	5	
	3. Regroup three- and four-digit numbers in addition and subtraction.	5	65	30	10	75	15	14	
	4. Do multiplication and division facts through 5's.	20	65	15	40	50	10	26	135
	5. Solve addition and subtraction story problems by writing equations which use only one operation and number facts through 5.	15	45	40	30	60	10	8	
	6. Solve multiplication and division story problems by writing equations which use only one operation and number facts through 5.	0	45	55	15	45	40	8	

A SUMMARY OF OUTCOMES IN THE MATHEMATICS PROGRAM IN GOOD ELEMENTARY SCHOOL

	(A) Critical Objectives "By the end of each grade or course in the Program, a student should be able to..."	Summary of Student Performance: Percentage of Students who worked on the objective						Number of students who did not work on this particular objective	Number of students involved in the total program
		and demonstrated achievement		but did not demonstrate achievement	and demonstrated				
		before instruction (AB)	after instruction (AA)	(NA)	considerable effort (CE)	some effort (SE)	little effort (LE)		
Grade 4	1. Write numbers through one million.	5	60	35	0	65	25	14	145
	2. Add and prove answers.	15	65	20	20	60	20	19	
	3. Subtract and prove answers.	20	55	25	40	45	15	5	
	4. Multiply basic facts through 9.	40	45	15	20	50	30	9	
	5. Divide basic facts through 9.	30	55	15	5	65	30	7	
	6. Add, subtract, multiply and divide to solve story problems.	0	40	60	0	75	25	30	
	7. Add, subtract, multiply and divide to solve measurement problems.	15	40	45	5	80	15	24	
	8. Add, subtract, multiply and divide to solve money problems.	20	45	35	20	60	20	3	
	9. Multiply with a two-digit multiplier.	30	35	35	25	55	20	12	
	10. Divide with a one-digit divisor.	15	50	35	40	40	20	6	
Grade 5	1. Solve problems by adding whole numbers.	30	20	50	30	25	45	4	120
	2. Solve problems by subtracting whole numbers (a 4-digit number from a 3-digit number).	10	55	35	30	35	35	7	
	3. Solve problems by multiplying (a 3-digit number by a 2-digit number).	20	20	60	5	65	30	19	
	4. Solve problems by dividing (a 5-digit number by a 2-digit number).	0	30	70	5	50	45	35	
	5. Convert tables of measure of linear, liquid, time and weight.	20	60	20	40	55	5	12	
	6. Show equations for solving word problems.	5	35	60	5	50	45	13	
	7. Solve fractional problems using addition and subtraction.	5	35	60	10	55	35	6	
	8. Solve decimal problems using addition and subtraction.	0	40	60	5	80	15	35	
	9. Compute the perimeter of polygons.	0	45	55	5	60	35	7	

A SUMMARY OF OUTCOMES IN THE MATHEMATICS PROGRAM IN GOOD ELEMENTARY SCHOOL

	(A) Critical Objectives "By the end of each grade or course in the Program, a student should be able to..."	Summary of Student Performance: Percentage of Students who worked on the objective						Number of students who did not work on this particular objective	Number of students involved in the total program
		and demonstrated achievement		but did not demonstrate achievement	and demonstrated				
		before instruction (AB)	after instruction (AA)	(NA)	considerable effort (CE)	some effort (SE)	little effort (LE)		
Grade 6	1. *Add and subtract positive whole numbers.*	50	45	5	50	45	5	27	140
	2. *Multiply and divide positive whole numbers.*	30	40	30	50	40	10	12	
	3. *Add and subtract like and unlike fractions.*	5	45	50	30	60	10	5	
	4. *Multiply and divide whole, mixed and fractional numbers.*	30	15	55	5	60	35	12	
	5. *Add and subtract decimals from tenths to ten-thousandths.*	40	45	15	15	50	45	2	
	6. *Multiply and divide decimals from tenths to ten-thousandths.*	15	50	35	30	60	10	9	
	7. *Recognize and solve problems related to geometric shapes (area, volume, circumferences, etc.).*	15	45	40	20	70	10	12	
	8. *Make conversions of decimals.*	15	50	35	20	65	15	19	
	9. *Write equations, solve and prove answers for story problems.*	0	45	55	5	55	40	5	

TASK FORCE SUMMARY COMMENTS-INSTRUCTIONAL PROCESSES--MATHEMATICS
GOOD ELEMENTARY SCHOOL

A reading of the Instructional Program Summary Report for mathematics prepared by each teacher in Good Elementary School reveals careful planning by teachers for instruction in mathematics. Not only were the critical objectives and achievement indicators clearly stated, but the materials used and the processes involved in instruction were also clearly articulated.

Of particular interest was the variety of learning experiences provided to meet the students' individual needs. It became apparent that individualization of the program was the key for the teachers in Good Elementary School to meet their objectives. Extensive use was made of manipulative aids and worksheets. Among the aids were number games, flash cards, duplicated materials, chalk-board and number relays, time speed tests, money games, math puzzles, films and transparencies used on overhead projectors. Student tutors often assisted in individualizing instruction and, in many classes, supplementary texts were used. Day-to-day application of math principles was practiced in the counting of lunch money and the recording of daily attendance. One classroom had a rummage sale using actual money.

Teacher evaluation of student progress at all stages of the program and the teachers' desire to revise and reconstruct various phases of the program to meet individual needs, was apparent. The following suggestions were included in the Instructional Program Summary Report: that in some cases a change in the sequence of presenting units would be advisable; that more time should be spent on multiplication and division of whole

numbers before attempting fractions; that the presentation of basic addition and subtraction facts could come at an earlier stage in the program; that study halls should be scheduled to provide students with individual help when they need it and that, a greater concentration on story problems is needed.

A reading of the Instructional Program Summary Reports also provides evidence that teachers continually assessed the value of tests and the kinds of tests that would best enable them to evaluate student progress and diagnose student difficulties. Extensive pre- and post-testing was used in the total program.

Among the recommendations for the future made by individual teachers were the following:

(1) Reduce the number of problems in a particular test to better suit first graders. It was apparent that shorter-timed tests could be conducted in many instances.

(2) Conduct periodic reviews to carefully monitor the progress of students toward achievement.

(3) Make more extensive use of the post-tests at the end of each unit rather than the end of the semester.

A final interesting aspect of the Instructional Program Summary Report is that they not only show the degree to which students have achieved the various objectives which teachers had set, but they also point out the areas in which changes should be made for more effective instruction during another year.

ASSESSING THE CONTRIBUTION OF THE MATHEMATICS PROGRAM IN GOOD ELEMENTARY SCHOOL TO ACHIEVEMENT OF EMERALD'S BROAD EDUCATIONAL GOALS

(A) Selected Community-Defined Goals Relevant to Mathematics "During one's elementary and secondary education in Emerald School District, each student should develop..."	(B) Match	(C) Critical Objectives of the Program in 19__-__ "By the end of elementary school, a student should be able to..."	(D) Code Numbers of the Grade or Course Objectives Comprising Each Critical Program Objective. (In parentheses, the cumulative percentage of students who acheived each objective.)					
			Grade 1	*Grade 2*	*Grade 3*	*Grade 4*	*Grade 5*	*Grade 6*
Such Basic Skills as: A. *Quantitative Development* 1. *Principles of numbers, algebra, geometry* 1. *properties of numbers* • 2. *geometric properties of common figures* • 3. *properties of algebraic expressions* • 2. *Basic Operations* 1. *adding, subtracting, multiplying and dividing numerical terms* • 2. *simplifying algebraic expressions* • 3. *grouping and solving algebraic equations* • 4. *reducing trigonometric functions* • 3. *Problem Solving* 1. *solving numerical problems* • 2. *using algebra, or geometry, or trigonometry to solve problems* • 3. *applying the calculus to solve problems* • 4. *Measurement* 1. *using linear measures* • 2. *using statistical measures* • 3. *using trigonometric measures* •		• 1. *Recognize, read, write, and indicate the relative value of any number or numeral.*	1 (85) 2 (75) 3 (85)	1 (85) 2 (85)	1 (75) 2 (85)	1 (65)		
		• 2. *Add, subtract, multiply and divide whole numbers, decimals, and fractions.*	4 (85)	3 (80) 4 (70) 6 (75) 7 (75)	3 (70) 4 (85)	2 (80) 3 (75) 4 (85) 5 (85) 9 (65) 10 (65)	1 (50) 2 (65) 3 (40) 4 (30) 7 (40) 8 (40)	1 (95) 2 (70) 3 (50) 4 (45) 5 (85) 6 (65) 8 (65)
		• 3. *Tell and compute time.*	5 (90)	8 (80)				
		• 4. *Solve measurement and money problems by adding, subtracting, multiplying, and dividing.*		5 (45)		7 (55) 8 (65)	5 (80)	
		• 5. *Solve story problems by writing, solving and proving appropriate equations.*			5 (60) 6 (45)	6 (40)	6 (40)	9 (45)
		• 6. *Recognize, measure, construct and solve problems related to geometric shapes.*					9 (45)	7 (80)

To: Emerald School District Board of Education

From: Component Five Task Force

Date: July 16, 19__

Re: Mathematics Program, Good Elementary School

Our task was the following: To ascertain the gaps and matches between the Emerald School District community-defined goals and the district's achievement of those goals in the Mathematics Program in grades 1-6 at Good Elementary School.

We concluded that:

1) All critical objectives are related to the district's overall Program Goals.

2) All critical objectives, with one exception, are directly related to the community-defined goals for Mathematics. This exception is to "Tell and Compute Time."

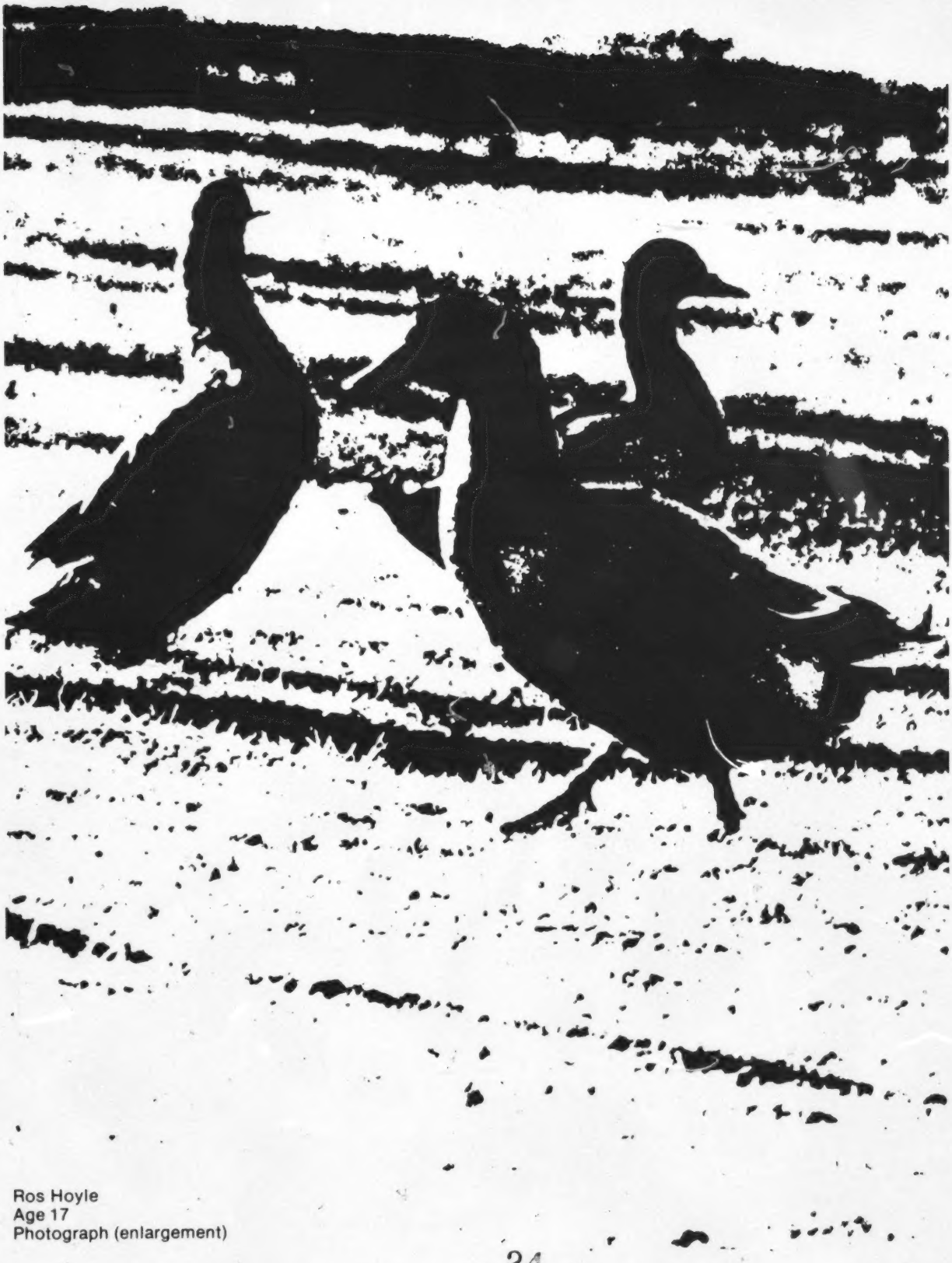
3) Based on the data in the Instructional Program Summary Reports, at least 35% of the students are achieving the objectives after instruction with one exception.

The critical objective which was not achieved by at least 35% of the students (Grade 5, Mathematics) reads:

> "4. Solve problems by dividing (a 5-digit number by a 2-digit number)."

The Instructional Program Summary Reports indicate that only 30% of the students are achieving this objective therefore, the Task Force recommends that the instructors in this content area look closely at the objective to determine the cause of the lack of achievement--whether it is due to instructional processes, assessment procedures, lack of continuity or a variety of other reasons.

4) Furthermore, we found that none of the community-defined goals were related to students' understanding of the metric system. Due to the increased publicity and interest among various educational groups toward the metric system, we would like to see a committee formed to reconsider the development of an understanding of the metric system as a broad goal.



Ros Hoyle
Age 17
Photograph (enlargement)

3. Analysis

Once the Task Force has completed their Component Five report, one might ask "So what?" Now that the report is available, how can it be used?

It is important to keep in mind that data are useful only as they can be transformed into information, and information is useful only as a basis for decision-making. How the data can best be used in making decisions depends on the specific needs of the district.

As outlined in Section One, Component Five activity addresses three specific types of district needs:

1. The need for greater consonance in the district's grade-level objectives;
2. The need for better matches between community expectations and the district's program objectives; and
3. The need for higher levels of performance within programs.

Some of the ways in which the report prepared by the Component Five Task Force can be used to resolve these three types of needs are examined here.

Consonance in Program Objectives

The Component Five Report provides an outline of the district's program objectives for each grade level and area of the total curriculum. The availability of such information provides those who might be interested — parents, teachers, building administrators, district personnel — with a summarized overview of the program. One of the major benefits in having such information available is that gaps in district program objectives can be easily identified.

For example, assume that objectives related to measurement in Good Elementary School's mathematics program had been stressed in the first three grades and again at the sixth grade, but that there were no objectives related to measurement in either the fourth or fifth grade. Clearly, a gap exists in the area of measurement and such a gap may point to the need for reexamination of the mathematic objectives. This is not to say that all objectives must be presented at all grade levels but only that the consonance of the objectives should be considered. In fact, the teachers involved in the program may find that the objectives could be better covered in the first two grades with subsequent reviews in grades four and six — or some other pattern. Or they may decide that measurement is so important that it should be covered at all grade levels. Another possibility is that upon reexamination of their objectives, the teachers may find that the present program is meeting their needs, and therefore, no changes should be made.

Matching Community Goals and Program Objectives

One method of creating a better match between community-defined educational objectives and the district's critical program objectives is to revise the community-defined goals so that they become more compatible with the professionally-defined objectives, while a second method would be to modify the district's program objectives.

As an illustration, the professional staff of Good Elementary School had developed several critical objectives related to place value which included:

4th Grade - Students will identify numerals through one billion.
5th Grade - Students will identify and write numerals through one billion.
6th Grade - Students will convert standard numbers through billions, to word names; students will convert word names through billions to standard numbers.

However, the community had defined no goals related to place value. Therefore, while the Component Five Task Force was searching for gaps between community-defined goals and critical program objectives, they found no match in this specific area. Consequently, they recommended to the Emerald Board of Education that a community committee be formed to consider this problem. After the committee was formed, they decided to accept the goals as the community had written them; therefore, the critical program objective had to be reviewed. In another instance, the reverse could have occurred.

In the latter case, there may be need for the professional staff to reconsider their objectives. This is not meant to say that the objectives should be discarded, but rather that there may be a need for revision. Or it may mean that, upon further evaluation, the staff may decide that place value can be sufficiently taught at the fourth grade level and reviewed at the sixth grade level, leaving little need to emphasize it at the fifth grade level. Another possibility is that the professional staff may decide that greater emphasis should be placed on number concepts rather than on place value. Thus, although the place value objectives were still considered to be important, the emphasis would be shifted from place value to number concepts. A final possibility is that the staff, too, may remain firm in their decision to emphsize place value at all three grade levels.

Therefore, although Component Five emphasizes the matching process of community-defined goals and critical program objectives, nowhere does it say that a consensus must be reached on these goals and objectives. Rather, what is important is to have data which allows one to look at the matches between the community's expectations and the professionally-defined program objectives, and therefore have some basis for making well-informed decisions.

Identifying Performance Needs

The reports of the Component Five Task Force, once completed,

LONG RANGE PLAN: CURRICULUM DEVELOPMENT, GRADES 1-6

	75-76	76-77	77-78	78-79	79-80	80-81	81-82	82-83
Social Studies	Dist. Critical Obj. Identif.	Develop a Test (Criterion Ref.)		Teacher Plans (Recycling)	District Review of Obj. & Curr.	Text Adoption	Implement Dist. Program	Refine Obj. Dist. Criterion Ref. Test
Career Awareness				Teacher Plans to Coordinate with Social Studies	District Obj. Established	Coordinate with Social Studies Curriculum	Test and Revise to Accompany Soc. St. Prog.	
Math	Dist. Critical Obj. Identif.	Develop a Test (Criterion Ref.)	Review & Revise Dist. Curric.	Text Adoption	Implement Prog.	Refine Obj. & Dev. Dist. Test		Teacher Plans (Recycle)
Health		Tchr. Plans 1-6 Prog. for Drug & Fam. Life Ed.	Review & Revise Dist. Curric.	Text Adoption	Implement Prog. Refine Object.	Refine Obj. & Dev. Dist. Test		Teacher Plans (Recycle)
Science		Teacher Plans (Recycling)	Review & Revise Dist. Curric.	Text Adoption	Implement Prog. Refine Object.	Refine Obj. & Dev. Dist. Test		Teacher Plans (Recycle)
Language Arts		1st Sem. Review Dist. Curr. 2nd Sem. Text Adopt.	Implement Dist. Program	Refine Obj. & Dev. Dist. Test	Test & Analyze	Teacher Plans (Recycle)	Review & Revise Dist. Curric.	Text Adoption
Fine Arts---Music		Music Teachers Plan Dist. Prog.	Implement Music		Revise Dist. Obj.	Text Adoption		
Art			Tchr. Plans for Art Ed. (1-6)	Dist. Crit. Obj. for Art Ed.	Pilot & Refine	Implement Art	Refine Obj. Dev. Evaluation	
Physical Education			Teacher Plans 1-6	Develop Dist. Objectives	Pilot & Refine	Implement Prog.	Refine Obj. & Dev. Dist. Test	
Metric System	Investigate Using State Guidelines	District Plan	Tchr. Inservice	Pilot Program	Implement Dist. Plan			

provide at a glance, a summary of student performance outcome data for each of the program's critical objectives. Therefore, given such data, it is easy to identify those objectives for which outcome data may not be acceptable for various reasons. For example, those directly involved in a program may decide to reconsider all objectives which were achieved by less than 50% of the students or they may decide to take a closer look at only those objectives achieved by less than 25% of the students, or to set some other percentage which is more appropriate for their particular needs.

In reconsidering such objectives, it may be found that certain instructional processes have worked better than others in meeting a particular objective. In other cases, the assessment procedures which were used to measure whether or not the objective was actually achieved may have been found to be poor measures of achievement. In still other cases, one may find that there was a lack of continuity in the objectives at a particular grade level or between grade levels. For example, assume that a mathematics program objective related to linear measurement at that fourth grade level is being reviewed since it was found to be achieved by only 25% of the students. Upon careful examination, the teachers in the program may find nothing wrong with either the objective or the methods used to measure its achievement. However, they might see that there were no objectives related to linear measurement in any of the first three grades. Therefore, in this case, no change would be made in this particular objective, but instead, additional related objectives would be added at the first three grade levels.

No attempt is made here to point out all of the possible reasons that the actual outcomes may not be meeting the expected outcomes. Instead, several possible causes have been suggested to show how Component Five products can be used in assessing these needs.

Other Educational Requirements

Although teachers, students, administrators and district personnel are most directly involved in defining the instructional requirements for students in a particular program, other individuals and groups may also be interested in a district's instructional plan. One of those groups is the State Department of Education. Others include groups of professional educators such as teacher and administrator organizations. Once data have been generated through Component Five activity, personnel in local districts are able to compare their own programs with those suggested by other professional groups outside of their community and school district.

Long-Range Plans

The availability of data which illustrate the gaps and match and lack of match between the district's professional goals and the community-defined instructional goals can be used as an incentive to devise a long range plan for curriculum revision. Such a plan can be aligned with textbook adoption and testing programs, and thereby insure that all areas of curriculum are periodically reviewed. An example of one such plan is seen on pg. 20.

Summary

As more districts encourage input from members of the community in defining what they consider to be important educational priorities for students, and as professional educators continue to define, review and refine their expectations for students, additional uses of the data collected and compiled in Component Five will become evident.

Above all, district personnel should keep in mind their own purposes for implementing Component Five, and subsequently, their use of the data should be tied directly to those purposes.